



## SEQUENCE LISTING

<110> Bristol-Myers Squibb Company

<120> A NOVEL HUMAN LEUCINE-RICH REPEAT CONTAINING PROTEIN EXPRESSED  
PREDOMINATELY IN SMALL INTESTINE, HLRRS11

<130> D0066NP

<140> U.S. Serial No. 10/029,347

<141> 2001-12-20

<150> US 60/257,774

<151> 2000-12-22

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<170> PatentIn version 3.2

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Cys Thr Asp Pro Phe Glu Ala Ala Ser Gly Ala Arg Val Leu Gly Gly
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Gly Cys Gly Leu Gln Thr Leu Ser Leu Ala Ser Val Glu Leu Ser Glu	
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Gln Ser Leu Gln Glu Leu Gln Ala Val Lys Arg Ala Lys Pro Asp Leu	
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Val Ile Thr His Pro Ala Leu Asp Gly His Pro Gln Pro Pro Lys Glu	
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Arg Gly Phe Ser Asp Lys Asp Lys Lys Lys Tyr Phe Tyr Lys Phe Phe  
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Glu Thr Leu Phe Ala Leu Cys Phe Val Pro Phe Val Cys Trp Ile Val  
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Cys Thr Val Leu Arg Gln Gln Leu Glu Leu Gly Arg Asp Leu Ser Arg  
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Thr Ser Lys Thr Thr Thr Ser Val Tyr Leu Leu Phe Ile Thr Ser Val  
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Leu Ser Ser Ala Pro Val Ala Asp Gly Pro Arg Leu Gln Gly Asp Leu  
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Arg Asn Leu Cys Arg Leu Ala Arg Glu Gly Val Leu Gly Arg Arg Ala  
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Gln Phe Ala Glu Lys Glu Leu Glu Gln Leu Glu Leu Arg Gly Ser Lys  
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Val Gln Thr Leu Phe Leu Ser Lys Lys Glu Leu Pro Gly Val Leu Glu  
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Thr Glu Val Thr Tyr Gln Phe Ile Asp Gln Ser Phe Gln Glu Phe Leu  
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Ala Ala Leu Ser Tyr Leu Leu Glu Asp Gly Gly Val Pro Arg Thr Ala



Leu Ser Glu Ala Leu Arg Ala Ala Pro Ala Leu Thr Glu Leu Gly Leu  
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Leu His Asn Arg Leu Ser Glu Ala Gly Leu Arg Met Leu Ser Glu Gly  
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Leu Ala Trp Pro Gln Cys Arg Val Gln Thr Val Arg Val Gln Leu Pro  
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Asp Pro Gln Arg Gly Leu Gln Tyr Leu Val Gly Met Leu Arg Gln Ser  
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Pro Ala Leu Thr Thr Leu Asp Leu Ser Gly Cys Gln Leu Pro Ala Pro  
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Met Val Thr Tyr Leu Cys Ala Val Leu Gln His Gln Gly Cys Gly Leu  
565 570 575

Gln Thr Leu Ser Leu Ala Ser Val Glu Leu Ser Glu Gln Ser Leu Gln  
580 585 590

Glu Leu Gln Ala Val Lys Arg Ala Lys Pro Asp Leu Val Ile Thr His  
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Ser Gly Met Glu Val Ala Ser Tyr Leu Val Ala Gln Tyr Gly Glu Gln  
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Arg Ala Trp Asp Leu Ala Leu His Thr Trp Glu Gln Met Gly Leu Arg  
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Ser Leu Cys Ala Gln Ala Gln Glu Gly Ala Gly His Ser Pro Ser Phe  
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Pro Tyr Ser Pro Ser Glu Pro His Leu Gly Ser Pro Ser Gln Pro Thr  
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Ser Thr Ala Val Leu Met Pro Trp Ile His Glu Leu Pro Ala Gly Cys  
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Thr Gln Gly Ser Glu Arg Arg Val Leu Arg Gln Leu Pro Asp Thr Ser  
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Gly Arg Arg Trp Arg Glu Ile Ser Ala Ser His Leu Tyr Gln Ala Leu  
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Pro Ser Ser Pro Asp His Glu Ser Pro Ser Gln Glu Ser Pro Asn Ala  
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Pro Thr Ser Thr Ala Val Leu Gly Ser Trp Gly Ser Pro Pro Gln Pro  
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Ser Leu Ala Pro Arg Glu Gln Glu Ala Pro Gly Thr Gln Trp Pro Leu  
 195 200 205

Asp Glu Thr Ser Gly Ile Tyr Tyr Thr Glu Ile Arg Glu Arg Glu Arg  
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Glu Lys Ser Glu Lys Gly Arg Pro Pro Trp Ala Ala Val Val Gly Thr  
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Pro Pro Gln Ala His Ser Ser Leu Gln Pro His His His Pro Trp Glu  
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Pro Ser Val Arg Glu Ser Leu Cys Ser Thr Trp Pro Trp Lys Asn Glu



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Gly Leu Asp Thr Gln Glu Pro Arg Ile Val Ile Leu Gln Gly Ala Ala		
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Gly Ile Gly Lys Ser Thr Leu Ala Arg Gln Val Lys Glu Ala Trp Gly		
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Arg Gly Gln Leu Tyr Gly Asp Arg Phe Gln His Val Phe Tyr Phe Ser		
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Cys Arg Glu Leu Ala Gln Ser Lys Val Val Ser Leu Ala Glu Leu Ile		
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Arg Pro Glu Arg Leu Leu Phe Ile Leu Asp Gly Val Asp Glu Pro Gly		
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Trp Val Leu Gln Glu Pro Ser Ser Glu Leu Cys Leu His Trp Ser Gln		
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Pro Gln Pro Ala Asp Ala Leu Leu Gly Ser Leu Leu Gly Lys Thr Ile		
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Asn Leu Ile Pro Ser Leu Glu Gln Ala Arg Trp Val Glu Val Leu Gly		
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Phe Ser Glu Ser Ser Arg Lys Glu Tyr Phe Tyr Arg Tyr Phe Thr Asp		
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Lys His Gly Leu Asp Gly Ala Ile Ile Ser Thr Phe Leu Lys Met Gly  
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Phe Leu Leu Gly Leu Leu Ser Asp Glu Gly Glu Arg Glu Met Glu Asn  
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Ile Phe His Cys Arg Leu Ser Gln Gly Arg Asn Leu Met Gln Trp Val  
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Pro Ser Leu Gln Leu Leu Leu Gln Pro His Ser Leu Glu Ser Leu His  
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Cys Leu Tyr Glu Thr Arg Asn Lys Thr Phe Leu Thr Gln Val Met Ala  
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His Phe Glu Glu Met Gly Met Cys Val Glu Thr Asp Met Glu Leu Leu  
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Val Cys Thr Phe Cys Ile Lys Phe Ser Arg His Val Lys Lys Leu Gln  
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Leu Ile Glu Gly Arg Gln His Arg Ser Thr Trp Ser Pro Ser Met Val  
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Val Leu Phe Arg Trp Val Pro Val Thr Asp Ala Tyr Trp Gln Ile Leu  
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Gly Asn Ser Leu Ser His Ser Ala Val Lys Ser Leu Cys Lys Thr Leu  
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Gln Arg Leu Gln Leu Val Ser Cys Gly Leu Thr Ser Asp Cys Cys Gln  
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Gly Leu Arg His Pro Ala Cys Lys Leu Ile Arg Leu Gly Leu Asp Gln  
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His Thr Lys Pro Leu Gly Thr Asp Asp Asp Phe Trp Gly Pro Thr  
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Arg Val His Phe Pro Val Ala Gly Ser Tyr Arg Trp Pro Asn Thr  
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Phe Cys Val Trp Asp Gln Phe Leu Gly Glu Ile Asn Pro Gln His  
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Asp Lys Lys Asp Glu Thr Leu Val Trp Glu Ala Leu Val Lys Pro 1295 1300 1305				
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Val Val Leu Asp Lys Leu His Gly Gln Val Leu Ser Gln Glu Gln 1355 1360 1365				
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Lys Leu Phe Ser Leu Ser Gln Ser Trp Asp Arg Lys Cys Lys Asp  
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Gly Leu Tyr Gln Ala Leu Lys Glu Thr His Pro His Leu Ile Met  
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 <213> Homo sapiens

<400> 4

Met Gly Phe Asn Leu Gln Ala Leu Leu Glu Gln Leu Ser Gln Asp Glu  
 1 5 10 15

Leu Ser Lys Phe Lys Tyr Leu Ile Thr Thr Phe Ser Pro Ala His Glu  
 20 25 30

Leu Gln Lys Ile Pro His Lys Glu Val Asp Lys Ala Asp Gly Lys Gln  
 35 40 45

Leu Val Glu Ile Leu Thr Thr His Cys Asp Ser Tyr Trp Val Glu Met  
 50 55 60

Ala Ser Leu Gln Val Phe Glu Lys Met His Arg Met Asp Leu Ser Glu  
 65 70 75 80

Arg Ala Lys Asp Glu Val Arg Glu Ala Ala Leu Lys Ser Phe Asn Lys  
 85 90 95

Arg Lys Pro Leu Ser Leu Gly Ile Thr Arg Lys Glu Arg Pro Pro Leu  
 100 105 110

Asp Val Asp Glu Met Leu Glu Arg Phe Lys Thr Glu Ala Gln Asp Lys  
 115 120 125

Asp Asn Arg Cys Arg Tyr Ile Leu Lys Thr Lys Phe Arg Glu Met Trp  
 130 135 140

Lys Ser Trp Pro Gly Asp Ser Lys Glu Val Gln Val Met Ala Glu Arg  
 145 150 155 160

Tyr Lys Met Leu Ile Pro Phe Ser Asn Pro Arg Val Leu Pro Gly Pro  
 165 170 175

Phe Ser Tyr Thr Val Val Leu Tyr Gly Pro Ala Gly Leu Gly Lys Thr  
 180 185 190

Thr Leu Ala Gln Lys Leu Met Leu Asp Trp Ala Glu Asp Asn Leu Ile  
 195 200 205

His Lys Phe Lys Tyr Ala Phe Tyr Leu Ser Cys Arg Glu Leu Ser Arg  
 210 215 220

Leu Gly Pro Cys Ser Phe Ala Glu Leu Val Phe Arg Asp Trp Pro Glu  
 225 230 235 240

Leu Gln Asp Asp Ile Pro His Ile Leu Ala Gln Ala Arg Lys Ile Leu  
 245 250 255

Phe Val Ile Asp Gly Phe Asp Glu Leu Gly Ala Ala Pro Gly Ala Leu  
 260 265 270

Ile Glu Asp Ile Cys Gly Asp Trp Glu Lys Lys Lys Pro Val Pro Val  
 275 280 285

Leu Leu Gly Ser Leu Leu Asn Arg Val Met Leu Pro Lys Ala Ala Leu  
 290 295 300

Leu Val Thr Thr Arg Pro Arg Ala Leu Arg Asp Leu Arg Ile Leu Ala  
 305 310 315 320

Glu Glu Pro Ile Tyr Ile Arg Val Glu Gly Phe Leu Glu Glu Asp Lys  
 325 330 335

Arg Ala Tyr Phe Leu Arg His Phe Gly Asp Glu Asp Gln Ala Met Arg  
 340 345 350

Ala Phe Glu Leu Met Arg Ser Asn Ala Ala Leu Phe Gln Leu Gly Ser

355	360	365
Ala Pro Ala Val Cys Trp Ile Val Cys Thr Thr Leu Lys Leu Gln Met 370 375 380		
Glu Lys Gly Glu Asp Pro Val Pro Thr Cys Leu Thr Arg Thr Gly Leu 385 390 395 400		
Phe Leu Arg Phe Leu Cys Ser Arg Phe Pro Gln Gly Ala Gln Leu Arg 405 410 415		
Gly Ala Leu Arg Thr Leu Ser Leu Leu Ala Ala Gln Gly Leu Trp Ala 420 425 430		
Gln Thr Ser Val Leu His Arg Glu Asp Leu Glu Arg Leu Gly Val Gln 435 440 445		
Glu Ser Asp Leu Arg Leu Phe Leu Asp Gly Asp Ile Leu Arg Gln Asp 450 455 460		
Arg Val Ser Lys Gly Cys Tyr Ser Phe Ile His Leu Ser Phe Gln Gln 465 470 475 480		
Phe Leu Thr Ala Leu Phe Tyr Thr Leu Glu Lys Glu Glu Glu Glu Asp 485 490 495		
Arg Asp Gly His Thr Trp Asp Ile Gly Asp Val Gln Lys Leu Leu Ser 500 505 510		
Gly Val Glu Arg Leu Arg Asn Pro Asp Leu Ile Gln Ala Gly Tyr Tyr 515 520 525		
Ser Phe Gly Leu Ala Asn Glu Lys Arg Ala Lys Glu Leu Glu Ala Thr 530 535 540		
Phe Gly Cys Arg Met Ser Pro Asp Ile Lys Gln Glu Leu Leu Arg Cys 545 550 555 560		
Asp Ile Ser Cys Lys Gly Gly His Ser Thr Val Thr Asp Leu Gln Glu 565 570 575		
Leu Leu Gly Cys Leu Tyr Glu Ser Gln Glu Glu Glu Leu Val Lys Glu 580 585 590		



Val Met Ala Gln Phe Lys Glu Ile Ser Leu His Leu Asn Ala Val Asp  
 595 600 605

Val Val Pro Ser Ser Phe Cys Val Lys His Cys Arg Asn Leu Gln Lys  
 610 615 620

Met Ser Leu Gln Val Ile Lys Glu Asn Leu Pro Glu Asn Val Thr Ala  
 625 630 635 640

Ser Glu Ser Asp Ala Glu Val Glu Arg Ser Gln Asp Asp Gln His Met  
 645 650 655

Leu Pro Phe Trp Thr Asp Leu Cys Ser Ile Phe Gly Ser Asn Lys Asp  
 660 665 670

Leu Met Gly Leu Ala Ile Asn Asp Ser Phe Leu Ser Ala Ser Leu Val  
 675 680 685

Arg Ile Leu Cys Glu Gln Ile Ala Ser Asp Thr Cys His Leu Gln Arg  
 690 695 700

Val Val Phe Lys Asn Ile Ser Pro Ala Asp Ala His Arg Asn Leu Cys  
 705 710 715 720

Leu Ala Leu Arg Gly His Lys Thr Val Thr Tyr Leu Thr Leu Gln Gly  
 725 730 735

Asn Asp Gln Asp Asp Met Phe Pro Ala Leu Cys Glu Val Leu Arg His  
 740 745 750

Pro Glu Cys Asn Leu Arg Tyr Leu Gly Leu Val Ser Cys Ser Ala Thr  
 755 760 765

Thr Gln Gln Trp Ala Asp Leu Ser Leu Ala Leu Glu Val Asn Gln Ser  
 770 775 780

Leu Thr Cys Val Asn Leu Ser Asp Asn Glu Leu Leu Asp Glu Gly Ala  
 785 790 795 800

Lys Leu Leu Tyr Thr Thr Leu Arg His Pro Lys Cys Phe Leu Gln Arg  
 805 810 815

Leu Ser Leu Glu Asn Cys His Leu Thr Glu Ala Asn Cys Lys Asp Leu  
 820 825 830

Ala Ala Val Leu Val Val Ser Arg Glu Leu Thr His Leu Cys Leu Ala  
 835 840 845

Lys Asn Pro Ile Gly Asn Thr Gly Val Lys Phe Leu Cys Glu Gly Leu  
 850 855 860

Arg Tyr Pro Glu Cys Lys Leu Gln Thr Leu Val Leu Trp Asn Cys Asp  
 865 870 875 880

Ile Thr Ser Asp Gly Cys Cys Asp Leu Thr Lys Leu Leu Gln Glu Lys  
 885 890 895

Ser Ser Leu Leu Cys Leu Asp Leu Gly Leu Asn His Ile Gly Val Lys  
 900 905 910

Gly Met Lys Phe Leu Cys Glu Ala Leu Arg Lys Pro Leu Cys Asn Leu  
 915 920 925

Arg Cys Leu Trp Leu Trp Gly Cys Ser Ile Pro Pro Phe Ser Cys Glu  
 930 935 940

Asp Leu Cys Ser Ala Leu Ser Asn Gln Ser Leu Val Thr Leu Asp Leu  
 945 950 955 960

Gly Gln Asn Pro Leu Gly Ser Ser Gly Val Lys Met Leu Phe Glu Thr  
 965 970 975

Leu Thr Cys Ser Ser Gly Thr Leu Arg Thr Leu Arg Leu Lys Ile Asp  
 980 985 990

Asp Phe Asn Asp Glu Leu Asn Lys Leu Leu Glu Glu Ile Glu Glu Lys  
 995 1000 1005

Asn Pro Gln Leu Ile Ile Asp Thr Glu Lys His His Pro Trp Ala  
 1010 1015 1020

Glu Arg Pro Ser Ser His Asp Phe Met Ile  
 1025 1030

<210> 5  
 <211> 2763  
 <212> DNA  
 <213> Homo Sapiens

<400> 5  
 cggacgcgtg ggcgcgcagc ctggctgacc tgatcctgga ccagtgcccc gaccgcggcg 60  
 cgccggtgcc gcagatgctg gccagccgc agcggctgct cttcatcctg gacggcgcg 120  
 acgagctgcc ggcgctgggg ggccccgagg ccgcgccctg cacagacccc ttcgaggcg 180  
 cgagcggcgc gcggtgcta ggcgggtgc tgagtaaggc gctgctgcc acggccctcc 240  
 tgctggtgac cacgcgcgc gccgccccg ggaggctgca gggcgcctg tgttccccgc 300  
 agtgcgccga ggtgcgcggc ttctccgaca aggacaagaa gaagtatttc tacaagttct 360  
 tccgggatga gaggaggcc gagcgcgcct accgcttcgt gaaggagaac gagacgctgt 420  
 tcgcgctgtg cttcgtgccc ttcgtgtgct ggatcgtgtg caccgtgctg cgccagcagc 480  
 tggagctcgg tcgggacctg tcgcgcacgt ccaagaccac cacgtcagtg tacctgcttt 540  
 tcatcaccag cgttctgagc tcggctccgg tagccgacgg gccccggtg caggcgacc 600  
 tgcgcaatct gtgccgctg gccgcgagg gcgtcctcgg acgcagggcg cagtttgccg 660  
 agaaggaact ggagcaactg gagcttcgtg gctccaaagt gcagacgctg tttctcagca 720  
 aaaaggagct gccgggcgtg ctggagacag aggtcaccta ccagttcatc gaccagagct 780  
 tccaggagtt cctcgcggca ctgtcctacc tgctggagga cggcggggtg cccaggaccg 840  
 cggctggcgg cgttgggaca ctctgctg gggacgcca gccgcacagc cacttggtgc 900  
 tcaccacgcg cttcctcttc ggactgctga gcgcggagcg gatgcgcgac atcgagcgcc 960  
 acttcggctg catggtttca gagcgtgtga agcaggaggc cctgcggtgg gtgcagggac 1020  
 agggacaggg ctgccccgga gtggcaccag aggtgaccga gggggccaaa gggctcgagg 1080  
 acaccgaaga gccagaggag gaggaggagg gagaggagcc caactaccca ctggagttgc 1140  
 tgtactgcct gtacgagacg caggaggacg cgtttgctgc ccaagccctg tgccggttcc 1200  
 cgagctggc gctgcagcga gtgcgcttct gccgcatgga cgtggctgtt ctgagctact 1260  
 gcgtgaggtg ctgccctgct ggacaggcac tgcggctgat cagctgcaga ttggttgctg 1320  
 cgcaggagaa gaagaagaag agcctgggga agcggctcca ggccagcctg ggtggcggca 1380  
 gttctcaagg caccacaaaa caactgccag cctcccttct tcatccactc tttcaggcaa 1440  
 tgactgaccc actgtgcat ctgagcagcc tcacgctgtc cactgcaaa ctccctgacg 1500  
 cggctctgcc agacctttct gaggccctga gggcagcccc cgactgacg gagctgggcc 1560

tcctccacaa caggctcagt gaggcgggac tgcgtatgct gagtgagggc ctagcctggc	1620
cgcagtgcag ggtgcagacg gtcaggtgag gcctggcctg ggagggaccg tgggatgccc	1680
ccgccacccc agcagctcct gaggtcggcc ctcccacagg gtacagctgc ctgaccccca	1740
gcgaggggctc cagtacctgg tgggtatgct tcggcagagc cccgccctga ccaccctgga	1800
tctcagcggc tgccaactgc ccgcccccat ggtgacctac ctgtgtgcag tcctgcagca	1860
ccaggggatgc ggctgcaga ccctcagtct ggcctctgtg gagctgagcg agcagtcact	1920
acaggagctt caggctgtga agagagcaaa gccggatctg gtcacacac acccagcgct	1980
ggacggccac ccacaacctc ccaaggaact catctcgacc ttctgaggct ctggtggcca	2040
gagcaggggtg gaagacccta gtcaaagtcc ctgtggagag aacggcccat tccaagggca	2100
ggaggatatt gctctcggcc tttgggaaac ttttgagccg agaggccgca gacaggcatg	2160
tgggaggccc agacacggca ccctgccccg tccaggacag gcccaggacc tgcccctctc	2220
tccacacctg gggtagccct tctccccag cccaccact actccacca ccttcctctc	2280
ctgagaccct ccagccattc cccttgaaaa cccccccga cccaagcca caataatgac	2340
agcgagagct ccaattaact aagcacctac ctggcggcag aataaccctt cactgcctga	2400
tccccatctg cagtgtggcc caacagcccc cagaactatg cccacataga ctggaggtag	2460
gcagttcacc gtccctccct gtaggaatg agaccatccc tgaggctatg gcccaggccc	2520
acaggcgctc agtgtctgag atctttggga agggagacta gggcaggtgg agacagcgca	2580
gaacccccgt gctgggtggg aagcatgacc acatggtggg tgagcagccc ccatgcactg	2640
acggtaaatt cccctgtgga ctcatctctg ttggtttcta ttacacctgg ccaggcgtgg	2700
tacaatacag gtcggtgctc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa	2760
aaa	2763

<210> 6  
 <211> 2054  
 <212> DNA  
 <213> Homo Sapiens

<400> 6	
ggaactggag caactggagc ttcgtggctc caaagtgcag acgctgtttc tcagcaaaaa	60
ggagctgccg ggcgtgctgg agacagaggt cacctaccag ttcacgcacc agagcttcca	120
ggagttcctc gcggcactgt cctacctgct ggaggacggc ggggtgcca ggaccgcggc	180
tggcggcggtt gggacactcc tgcgtgggga cgcccagccg cacagccact tgggtgctcac	240

cacgcgcttc ctcttcggac tgctgagcgc ggagcggatg cgcgacatcg agcgccactt	300
cggctgcatg gtttcagagc gtgtgaagca ggaggccctg cggtaggtgc agggacaggg	360
acagggctgc cccggagtgg caccagaggt gaccgagggg gccaaagggc tcgaggacac	420
cgaagagcca gaggaggagg aggagggaga ggagcccaac taccactgg agttgctgta	480
ctgcctgtac gagacgcagg aggacgcgtt tgtgcgcaa gccctgtgcc ggttcccga	540
gctggcgctg cagcgagtgc gcttctgcc catggacgtg gctgttctga gctactgct	600
gaggtgctgc cctgctggac aggcactgcg gctgatcagc tgcagattgg ttgctgcgca	660
ggagaagaag aagaagagcc tggggaagcg gctccaggcc agcctgggtg gcggcagttc	720
tcaaggcacc aaaaaaac tgccagcctc ctttcttcat ccactctttc aggcaatgac	780
tgaccactg tgccatctga gcagcctcac gctgtccac tgcaaactcc ctgacgcggt	840
ctgccgagac ctttctgagg ccctgagggc agccccgca ctgacggagc tgggcctcct	900
ccacaacagg ctgagtgagg cgggactgcg tatgctgagt gagggcctag cctggccgca	960
gtgcaggggtg cagacggtca ggtacagct gcctgacccc cagcgagggc tccagtacct	1020
ggtgggtatg cttcggcaga gccccgccct gaccaccctg gatctcagcg gctgccaaact	1080
gcccccccc atggtgacct acctgtgtgc agtcctgcag caccagggat gcggcctgca	1140
gaccctcagt ctggcctctg tggagctgag cgagcagtca ctacaggagc ttcaggctgt	1200
gaagagagca aagccggtac tggatcac acaccagcg ctggacggcc acccacaacc	1260
tccaagga ctcatctga ctttctgagg ctctggtggc cagagcaggg tggaagacct	1320
tagtcaaagt ccctgtggag agaacggccc attccaaggg caggaggata ttgctctcgg	1380
cctttgggaa acttttgagc cgagaggccg cagacaggca tgtgggaggc ccagacacgg	1440
caccctgcc cgtccaggac agggccagga cctgcccctc tctccacacc tggggtagcc	1500
cttctcccc agccccacca ctactccacc caccttctc tctgagacc ctccagccat	1560
tccccttgaa aacaccccc gacccaagc cacaataatg acagcgagag ctccaattaa	1620
ctaagcacct acctgggggc agaataacct ttactgcct gatccccatc tgcagtgtgg	1680
cccaacagcc ccagaaacta tgcccacata gactggaggt aggcagttca ccgtcccctcc	1740
ctgttaggaa tgagaccatc cctgaggcta tggcccaggc ccacaggcgt ccagtgtctg	1800
agatctttgg gaaggagac tagggcaggt ggagacagcg cagaaccccc gtgctgggtg	1860
ggaagcatga ccacacggtg ggtgagcagc ccccatgcac tgatggtaaa ttcccctgtg	1920

gactcatttc tgttggtttc tattacacct ggccaggcgt ggtacaatac aggtcgggtgc 1980  
tcacaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2040  
aaaaaaaaaa aaaa 2054

<210> 7  
<211> 314  
<212> DNA  
<213> homo sapiens

<220>  
<221> misc\_feature  
<222> (198)..(229)  
<223> wherein "n" is equal to A, C, G, or T.

<220>  
<221> misc\_feature  
<222> (289)..(289)  
<223> n is a, c, g, or t

<400> 7  
gccacttggt gctcaccacg cgcttcctct tcggactgct gagcgcggag ggatgcgcga 60  
catcgagcgc cacttcggct gcatggtttc agagcgtgtg aagcaggagg ccctgcggtg 120  
ggtgcaggga caggacagg gctgccccgg agtggcacca gaggtgaccg agggggccaa 180  
agggctcgag gacaccgnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnc ccaactaccc 240  
actggagttg ctgtactgcc tgtacgagac gcaggaggac gcgtttgtnc gccaaagccc 300  
tgtgccggtt cccg 314

<210> 8  
<211> 24  
<212> PRT  
<213> homo sapiens

<400> 8

Gly Ala Arg Val Leu Gly Gly Leu Leu Ser Lys Ala Leu Leu Pro Thr  
1 5 10 15

Ala Leu Leu Leu Val Thr Thr Arg  
20

<210> 9  
<211> 17  
<212> PRT  
<213> homo sapiens

<400> 9

Leu Phe Ala Leu Cys Phe Val Pro Phe Val Cys Trp Ile Val Cys Thr  
1 5 10 15

Val

<210> 10  
<211> 17  
<212> PRT  
<213> homo sapiens

<400> 10

Ser Val Tyr Leu Leu Phe Ile Thr Ser Val Leu Ser Ser Ala Pro Val  
1 5 10 15

Ala

<210> 11  
<211> 21  
<212> DNA  
<213> Homo sapiens

<400> 11  
catggtttca gagcgtgtga a

21

<210> 12  
<211> 23  
<212> DNA  
<213> Homo sapiens

<400> 12  
tcgtacaggc agtacagcaa ctc

23

<210> 13  
<211> 80  
<212> DNA  
<213> Homo sapiens

<400> 13  
cttcacacgc tctgaaacca tgcagccgaa gtggcgctcg atgtcgcgca tccctccgcg  
ctcagcagtc cgaagaggaa

60

80

<210> 14  
<211> 14  
<212> PRT

<213> homo sapiens

<400> 14

Arg Phe Val Lys Glu Asn Glu Thr Leu Phe Ala Leu Cys Phe  
1 5 10

<210> 15

<211> 17

<212> PRT

<213> homo sapiens

<400> 15

Phe Phe Arg Asp Glu Arg Arg Ala Glu Arg Ala Tyr Arg Phe Val Lys  
1 5 10 15

Glu

<210> 16

<211> 13

<212> PRT

<213> homo sapiens

<400> 16

Ala Leu Leu Leu Val Thr Thr Arg Ala Ala Ala Pro Gly  
1 5 10

<210> 17

<211> 13

<212> PRT

<213> homo sapiens

<400> 17

Glu Val Arg Gly Phe Ser Asp Lys Asp Lys Lys Lys Tyr  
1 5 10

<210> 18

<211> 13

<212> PRT

<213> homo sapiens

<400> 18

Arg Asp Leu Ser Arg Thr Ser Lys Thr Thr Thr Ser Val  
1 5 10

<210> 19



<211> 13  
<212> PRT  
<213> homo sapiens

<400> 19

Gln Thr Leu Phe Leu Ser Lys Lys Glu Leu Pro Gly Val  
1 5 10

<210> 20  
<211> 13  
<212> PRT  
<213> homo sapiens

<400> 20

Ser His Leu Val Leu Thr Thr Arg Phe Leu Phe Gly Leu  
1 5 10

<210> 21  
<211> 13  
<212> PRT  
<213> homo sapiens

<400> 21

Phe Gly Cys Met Val Ser Glu Arg Val Lys Gln Glu Ala  
1 5 10

<210> 22  
<211> 13  
<212> PRT  
<213> homo sapiens

<400> 22

Ala Leu Arg Leu Ile Ser Cys Arg Leu Val Ala Ala Gln  
1 5 10

<210> 23  
<211> 13  
<212> PRT  
<213> homo sapiens

<400> 23

Gly Ser Ser Gln Gly Thr Thr Lys Gln Leu Pro Ala Ser  
1 5 10

<210> 24  
<211> 13  
<212> PRT

<213> homo sapiens

<400> 24

Gln Cys Arg Val Gln Thr Val Arg Val Gln Leu Pro Asp  
1 5 10

<210> 25

<211> 514

<212> PRT

<213> homo sapiens

<400> 25

Met Cys Phe Ile Pro Leu Val Cys Trp Ile Val Cys Thr Gly Leu Lys  
1 5 10 15

Gln Gln Met Glu Ser Gly Lys Ser Leu Ala Gln Thr Ser Lys Thr Ser  
20 25 30

Thr Ala Val Tyr Val Phe Phe Leu Ser Ser Leu Leu Gln Pro Arg Gly  
35 40 45

Gly Ser Gln Glu His Gly Leu Cys Ala His Leu Trp Gly Leu Cys Ser  
50 55 60

Leu Ala Ala Asp Gly Ile Trp Asn Gln Lys Ile Leu Phe Glu Glu Ser  
65 70 75 80

Asp Leu Arg Asn His Gly Leu Gln Lys Ala Asp Val Ser Ala Phe Leu  
85 90 95

Arg Met Asn Leu Phe Gln Lys Glu Val Asp Cys Glu Lys Phe Tyr Ser  
100 105 110

Phe Ile His Met Thr Phe Gln Glu Phe Phe Ala Ala Met Tyr Tyr Leu  
115 120 125

Leu Glu Glu Glu Lys Glu Gly Arg Thr Asn Val Pro Gly Ser Arg Leu  
130 135 140

Lys Leu Pro Ser Arg Asp Val Thr Val Leu Leu Glu Asn Tyr Gly Lys  
145 150 155 160

Phe Glu Lys Gly Tyr Leu Ile Phe Val Val Arg Phe Leu Phe Gly Leu  
165 170 175

Val Asn Gln Glu Arg Thr Ser Tyr Leu Glu Lys Lys Leu Ser Cys Met  
180 185 190

Ile Ser Gln Gln Ile Arg Leu Glu Leu Leu Lys Trp Ile Glu Val Lys  
195 200 205

Ala Lys Ala Lys Lys Leu His Asp Gln Pro Ser Gln Leu Glu Leu Phe  
210 215 220

Tyr Cys Leu Tyr Glu Met Gln Glu Glu Asp Phe Val Gln Arg Ala Met  
225 230 235 240

Asp Tyr Phe Pro Lys Ile Glu Ile Asn Leu Ser Thr Arg Met Asp His  
245 250 255

Met Val Ser Ser Phe Cys Ile Glu Asn Cys His Arg Val Glu Ser Leu  
260 265 270

Ser Leu Gly Phe Leu His Asn Met Pro Lys Glu Glu Glu Glu Glu Glu  
275 280 285

Lys Glu Gly Arg His Leu Asp Met Val Gln Cys Val Leu Pro Ser Ser  
290 295 300

Ser His Ala Ala Cys Ser His Gly Leu Gly Arg Cys Gly Leu Ser His  
305 310 315 320

Glu Cys Cys Phe Asp Ile Ser Leu Val Leu Ser Ser Asn Gln Lys Leu  
325 330 335

Val Glu Leu Asp Leu Ser Asp Asn Ala Leu Gly Asp Phe Gly Ile Arg  
340 345 350

Leu Leu Cys Val Gly Leu Lys His Leu Leu Cys Asn Leu Lys Lys Leu  
355 360 365

Trp Leu Val Asn Ser Ala Leu Arg Gln Ser Val Val Gln Leu Cys Pro  
370 375 380

Arg Tyr Ser Ala Leu Ile Arg Ile Ser Arg Thr Phe Thr Ala Arg Gln  
385 390 395 400

His Ser Arg Arg Gln Gly Ile Lys Leu Leu Cys Glu Gly Leu Leu His  
405 410 415

Pro Asp Cys Lys Leu Gln Val Leu Glu Leu Asp Asn Cys Asn Leu Thr  
420 425 430

Ser His Cys Cys Trp Asp Leu Ser Thr Leu Leu Thr Ser Ser Gln Ser  
435 440 445

Leu Arg Lys Leu Ser Leu Gly Asn Asn Asp Leu Gly Asp Leu Gly Val  
450 455 460

Met Met Phe Cys Glu Val Leu Lys Gln Gln Ser Cys Leu Leu Gln Asn  
465 470 475 480

Leu Gly Leu Ser Glu Met Tyr Phe Asn Tyr Glu Thr Lys Ser Ala Leu  
485 490 495

Glu Thr Leu Gln Glu Glu Lys Pro Glu Leu Thr Val Val Phe Glu Pro  
500 505 510

Ser Trp

<210> 26  
<211> 1429  
<212> PRT  
<213> homo sapiens

<400> 26

Met Ala Gly Gly Ala Trp Gly Arg Leu Ala Cys Tyr Leu Glu Phe Leu  
1 5 10 15

Lys Lys Glu Glu Leu Lys Glu Phe Gln Leu Leu Leu Ala Asn Lys Ala  
20 25 30

His Ser Arg Ser Ser Ser Gly Glu Thr Pro Ala Gln Pro Glu Lys Thr  
35 40 45

Ser Gly Met Glu Val Ala Ser Tyr Leu Val Ala Gln Tyr Gly Glu Gln  
50 55 60

Arg Ala Trp Asp Leu Ala Leu His Thr Trp Glu Gln Met Gly Leu Arg

65					70						75					80
Ser	Leu	Cys	Ala	Gln	Ala	Gln	Glu	Gly	Ala	Gly	His	Ser	Pro	Ser	Phe	
				85					90					95		
Pro	Tyr	Ser	Pro	Ser	Glu	Pro	His	Leu	Gly	Ser	Pro	Ser	Gln	Pro	Thr	
			100					105					110			
Ser	Thr	Ala	Val	Leu	Met	Pro	Trp	Ile	His	Glu	Leu	Pro	Ala	Gly	Cys	
		115					120					125				
Thr	Gln	Gly	Ser	Glu	Arg	Arg	Val	Leu	Arg	Gln	Leu	Pro	Asp	Thr	Ser	
	130					135					140					
Gly	Arg	Arg	Trp	Arg	Glu	Ile	Ser	Ala	Ser	Leu	Leu	Tyr	Gln	Ala	Leu	
145					150					155					160	
Pro	Ser	Ser	Pro	Asp	His	Glu	Ser	Pro	Ser	Gln	Glu	Ser	Pro	Asn	Ala	
				165					170					175		
Pro	Thr	Ser	Thr	Ala	Val	Leu	Gly	Ser	Trp	Gly	Ser	Pro	Pro	Gln	Pro	
			180					185						190		
Ser	Leu	Ala	Pro	Arg	Glu	Gln	Glu	Ala	Pro	Gly	Thr	Gln	Trp	Pro	Leu	
		195					200					205				
Asp	Glu	Thr	Ser	Gly	Ile	Tyr	Tyr	Thr	Glu	Ile	Arg	Glu	Arg	Glu	Arg	
210						215					220					
Glu	Lys	Ser	Glu	Lys	Gly	Arg	Pro	Pro	Trp	Ala	Ala	Val	Val	Gly	Thr	
225					230					235					240	
Pro	Pro	Gln	Ala	His	Thr	Ser	Leu	Gln	Pro	His	His	His	Pro	Trp	Glu	
				245					250					255		
Pro	Ser	Val	Arg	Glu	Ser	Leu	Cys	Ser	Thr	Trp	Pro	Trp	Lys	Asn	Glu	
			260					265					270			
Asp	Phe	Asn	Gln	Lys	Phe	Thr	Gln	Leu	Leu	Leu	Leu	Gln	Arg	Pro	His	
		275					280					285				
Pro	Arg	Ser	Gln	Asp	Pro	Leu	Val	Lys	Arg	Ser	Trp	Pro	Asp	Tyr	Val	
	290					295					300					

Glu Glu Asn Arg Gly His Leu Ile Glu Ile Arg Asp Leu Phe Gly Pro  
 305 310 315 320

Gly Leu Asp Thr Gln Glu Pro Arg Ile Val Ile Leu Gln Gly Ala Ala  
 325 330 335

Gly Ile Gly Lys Ser Thr Leu Ala Arg Gln Val Lys Glu Ala Trp Gly  
 340 345 350

Arg Gly Gln Leu Tyr Gly Asp Arg Phe Gln His Val Phe Tyr Phe Ser  
 355 360 365

Cys Arg Glu Leu Ala Gln Ser Lys Val Val Ser Leu Ala Glu Leu Ile  
 370 375 380

Gly Lys Asp Gly Thr Ala Thr Pro Ala Pro Ile Arg Gln Ile Leu Ser  
 385 390 395 400

Arg Pro Glu Arg Leu Leu Phe Ile Leu Asp Gly Val Asp Glu Pro Gly  
 405 410 415

Trp Val Leu Gln Glu Pro Ser Ser Glu Leu Cys Leu His Trp Ser Gln  
 420 425 430

Pro Gln Pro Ala Asp Ala Leu Leu Gly Ser Leu Leu Gly Lys Thr Ile  
 435 440 445

Leu Pro Glu Ala Ser Phe Leu Ile Thr Ala Arg Thr Thr Ala Leu Gln  
 450 455 460

Asn Leu Ile Pro Ser Leu Glu Gln Ala Arg Trp Val Glu Val Leu Gly  
 465 470 475 480

Phe Ser Glu Ser Ser Arg Lys Glu Tyr Phe Tyr Arg Tyr Phe Thr Asp  
 485 490 495

Glu Arg Gln Ala Ile Arg Ala Phe Arg Leu Val Lys Ser Asn Lys Glu  
 500 505 510

Leu Trp Ala Leu Cys Leu Val Pro Trp Val Ser Trp Leu Ala Cys Thr  
 515 520 525

Cys Leu Met Gln Gln Met Lys Arg Lys Glu Lys Leu Thr Leu Thr Ser  
 530 535 540

Lys Thr Thr Thr Thr Leu Cys Leu His Tyr Leu Ala Gln Ala Leu Gln  
 545 550 555 560

Ala Gln Pro Leu Gly Pro Gln Leu Arg Asp Leu Cys Ser Leu Ala Ala  
 565 570 575

Glu Gly Ile Trp Gln Lys Lys Thr Leu Phe Ser Pro Asp Asp Leu Arg  
 580 585 590

Lys His Gly Leu Asp Gly Ala Ile Ile Ser Thr Phe Leu Lys Met Gly  
 595 600 605

Ile Leu Gln Glu His Pro Ile Pro Leu Ser Tyr Ser Phe Ile His Leu  
 610 615 620

Cys Phe Gln Glu Phe Phe Ala Ala Met Ser Tyr Val Leu Glu Asp Glu  
 625 630 635 640

Lys Gly Arg Gly Lys His Ser Asn Cys Ile Ile Asp Leu Glu Lys Thr  
 645 650 655

Leu Glu Ala Tyr Gly Ile His Gly Leu Phe Gly Ala Ser Thr Thr Arg  
 660 665 670

Phe Leu Leu Gly Leu Leu Ser Asp Glu Gly Glu Arg Glu Met Glu Asn  
 675 680 685

Ile Phe His Cys Arg Leu Ser Gln Gly Arg Asn Leu Met Gln Trp Val  
 690 695 700

Pro Ser Leu Gln Leu Leu Leu Gln Pro His Ser Leu Glu Ser Leu His  
 705 710 715 720

Cys Leu Tyr Glu Thr Arg Asn Lys Thr Phe Leu Thr Gln Val Met Ala  
 725 730 735

His Phe Glu Glu Met Gly Met Cys Val Glu Thr Asp Met Glu Leu Leu  
 740 745 750

Val Cys Thr Phe Cys Ile Lys Phe Ser Arg His Val Lys Lys Leu Gln  
 755 760 765

Leu Ile Glu Gly Arg Gln His Arg Ser Thr Trp Ser Pro Thr Met Val  
 770 775 780

Val Leu Phe Arg Trp Val Pro Val Thr Asp Ala Tyr Trp Gln Ile Leu  
 785 790 795 800

Phe Ser Val Leu Lys Val Thr Arg Asn Leu Lys Glu Leu Asp Leu Ser  
 805 810 815

Gly Asn Ser Leu Ser His Ser Ala Val Lys Ser Leu Cys Lys Thr Leu  
 820 825 830

Arg Arg Pro Arg Cys Leu Leu Glu Thr Leu Arg Leu Ala Gly Cys Gly  
 835 840 845

Leu Thr Ala Glu Asp Cys Lys Asp Leu Ala Phe Gly Leu Arg Ala Asn  
 850 855 860

Gln Thr Leu Thr Glu Leu Asp Leu Ser Phe Asn Val Leu Thr Asp Ala  
 865 870 875 880

Gly Ala Lys His Leu Cys Gln Arg Leu Arg Gln Pro Ser Cys Lys Leu  
 885 890 895

Gln Arg Leu Gln Leu Val Ser Cys Gly Leu Thr Ser Asp Cys Cys Gln  
 900 905 910

Asp Leu Ala Ser Val Leu Ser Ala Ser Pro Ser Leu Lys Glu Leu Asp  
 915 920 925

Leu Gln Gln Asn Asn Leu Asp Asp Val Gly Val Arg Leu Leu Cys Glu  
 930 935 940

Gly Leu Arg His Pro Ala Cys Lys Leu Ile Arg Leu Gly Leu Asp Gln  
 945 950 955 960

Thr Thr Leu Ser Asp Glu Met Arg Gln Glu Leu Arg Ala Leu Glu Gln  
 965 970 975

Glu Lys Pro Gln Leu Leu Ile Phe Ser Arg Arg Lys Pro Ser Val Met



980						985						990					
Thr	Pro	Thr	Glu	Gly	Leu	Asp	Thr	Gly	Glu	Met	Ser	Asn	Ser	Thr	Ser		
		995					1000					1005					
Ser	Leu	Lys	Arg	Gln	Arg	Leu	Gly	Ser	Glu	Arg	Ala	Ala	Ser	His			
	1010					1015					1020						
Val	Ala	Gln	Ala	Asn	Leu	Lys	Leu	Leu	Asp	Val	Ser	Lys	Ile	Phe			
	1025					1030					1035						
Pro	Ile	Ala	Glu	Ile	Ala	Glu	Glu	Ser	Ser	Pro	Glu	Val	Val	Pro			
	1040					1045					1050						
Val	Glu	Leu	Leu	Cys	Val	Pro	Ser	Pro	Ala	Ser	Gln	Gly	Asp	Leu			
	1055					1060					1065						
His	Thr	Lys	Pro	Leu	Gly	Thr	Asp	Asp	Asp	Phe	Trp	Gly	Pro	Thr			
	1070					1075					1080						
Gly	Pro	Val	Ala	Thr	Glu	Val	Val	Asp	Lys	Glu	Lys	Asn	Leu	Tyr			
	1085					1090					1095						
Arg	Val	His	Phe	Pro	Val	Ala	Gly	Ser	Tyr	Arg	Trp	Pro	Asn	Thr			
	1100					1105					1110						
Gly	Leu	Cys	Phe	Val	Met	Arg	Glu	Ala	Val	Thr	Val	Glu	Ile	Glu			
	1115					1120					1125						
Phe	Cys	Val	Trp	Asp	Gln	Phe	Leu	Gly	Glu	Ile	Asn	Pro	Gln	His			
	1130					1135					1140						
Ser	Trp	Met	Val	Ala	Gly	Pro	Leu	Leu	Asp	Ile	Lys	Ala	Glu	Pro			
	1145					1150					1155						
Gly	Ala	Val	Glu	Ala	Val	His	Leu	Pro	His	Phe	Val	Ala	Leu	Gln			
	1160					1165					1170						
Gly	Gly	His	Val	Asp	Thr	Ser	Leu	Phe	Gln	Met	Ala	His	Phe	Lys			
	1175					1180					1185						
Glu	Glu	Gly	Met	Leu	Leu	Glu	Lys	Pro	Ala	Arg	Val	Glu	Leu	His			
	1190					1195					1200						

His	Ile	Val	Leu	Glu	Asn	Pro	Ser	Phe	Ser	Pro	Leu	Gly	Val	Leu
1205						1210					1215			
Leu	Lys	Met	Ile	His	Asn	Ala	Leu	Arg	Phe	Ile	Pro	Val	Thr	Ser
1220						1225					1230			
Val	Val	Leu	Leu	Tyr	His	Arg	Val	His	Pro	Glu	Glu	Val	Thr	Phe
1235						1240					1245			
His	Leu	Tyr	Leu	Ile	Pro	Ser	Asp	Cys	Ser	Ile	Arg	Lys	Glu	Leu
1250						1255					1260			
Glu	Leu	Cys	Tyr	Arg	Ser	Pro	Gly	Glu	Asp	Gln	Leu	Phe	Ser	Glu
1265						1270					1275			
Phe	Tyr	Val	Gly	His	Leu	Gly	Ser	Gly	Ile	Arg	Leu	Gln	Val	Lys
1280						1285					1290			
Asp	Lys	Lys	Asp	Glu	Thr	Leu	Val	Trp	Glu	Ala	Leu	Val	Lys	Pro
1295						1300					1305			
Gly	Asp	Leu	Met	Pro	Ala	Thr	Thr	Leu	Ile	Pro	Pro	Ala	Arg	Ile
1310						1315					1320			
Ala	Val	Pro	Ser	Pro	Leu	Asp	Ala	Pro	Gln	Leu	Leu	His	Phe	Val
1325						1330					1335			
Asp	Gln	Tyr	Arg	Glu	Gln	Leu	Ile	Ala	Arg	Val	Thr	Ser	Val	Glu
1340						1345					1350			
Val	Val	Leu	Asp	Lys	Leu	His	Gly	Gln	Val	Leu	Ser	Gln	Glu	Gln
1355						1360					1365			
Tyr	Glu	Arg	Val	Leu	Ala	Glu	Asn	Thr	Arg	Pro	Ser	Gln	Met	Arg
1370						1375					1380			
Lys	Leu	Phe	Ser	Leu	Ser	Gln	Ser	Trp	Asp	Arg	Lys	Cys	Lys	Asp
1385						1390					1395			
Gly	Leu	Tyr	Gln	Ala	Leu	Lys	Glu	Thr	His	Pro	His	Leu	Ile	Met
1400						1405					1410			

Glu Leu Trp Glu Lys Gly Ser Lys Lys Gly Leu Leu Pro Leu Ser  
 1415 1420 1425

Ser

<210> 27  
 <211> 8  
 <212> PRT  
 <213> bacteriophage T7

<400> 27

Asp Tyr Lys Asp Asp Asp Asp Lys  
 1 5

<210> 28  
 <211> 733  
 <212> DNA  
 <213> homo sapiens

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 aattcgaggg tgcaccgtca gtcttctctt tcccccaaaa acccaaggac accctcatga 120  
 tctcccggac tcttgaggtc acatgcgtgg tgggtggacgt aagccacgaa gaccctgagg 180  
 tcaagttcaa ctggtacgtg gacggcgtgg aggtgcataa tgccaagaca aagccgcggg 240  
 aggagcagta caacagcacg taccgtgtgg tcagcgtcct caccgtcctg caccaggact 300  
 ggctgaatgg caaggagtac aagtgcgaagg tctccaacaa agccctccca acccccatcg 360  
 agaaaacccat ctccaaagcc aaagggcagc cccgagaacc acaggtgtac accctgcccc 420  
 catcccggga tgagctgacc aagaaccagg tcagcctgac ctgcctggtc aaaggcttct 480  
 atccaagcga catcgccgtg gagtgggaga gcaatgggca gccggagaac aactacaaga 540  
 ccacgcctcc cgtgctggac tccgacggct ctttcttctt ctacagcaag ctcaccgtgg 600  
 acaagagcag gtggcagcag gggaacgtct tctcatgctc cgtgatgcat gaggctctgc 660  
 acaaccacta cacgcagaag agcctctccc tgtctccggg taaatgagtg cgacggccgc 720  
 gactctagag gat 733

<210> 29  
 <211> 39  
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<400> 29  
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<210> 30  
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<212> DNA  
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<400> 30  
gcagcagtcg acagaaggtc gagatgagtt ccttgagg 37

<210> 31  
<211> 39  
<212> DNA  
<213> Homo sapiens

<400> 31  
gcagcagcgg ccgcagtgctg gccagccgc agcggctgc 39

<210> 32  
<211> 37  
<212> DNA  
<213> Homo sapiens

<400> 32  
gcagcagtcg acatccaggg tggtcagggc ggggctc 37

<210> 33  
<211> 1032  
<212> PRT  
<213> Homo sapiens

<400> 33

Met Ala Ser Thr Arg Cys Lys Arg Tyr Leu Glu Asp Leu Glu Asp Val  
1 5 10 15

Asp Leu Lys Lys Phe Lys Met His Leu Glu Asp Tyr Pro Pro Gln Lys  
20 25 30

Gly Cys Ile Pro Leu Pro Arg Gly Gln Thr Glu Lys Ala Asp His Val  
35 40 45

Asp Leu Ala Thr Leu Met Ile Asp Phe Asn Gly Glu Glu Lys Ala Trp  
50 55 60

Ala Met Ala Val Trp Ile Phe Ala Ala Ile Asn Arg Arg Asp Leu Tyr  
65 70 75 80

Glu	Lys	Ala	Lys	Arg	Asp	Glu	Pro	Lys	Trp	Gly	Ser	Asp	Asn	Ala	Arg	
				85					90					95		
Val	Ser	Asn	Pro	Thr	Val	Ile	Cys	Gln	Glu	Asp	Ser	Ile	Glu	Glu	Glu	
			100					105					110			
Trp	Met	Gly	Leu	Leu	Glu	Tyr	Leu	Ser	Arg	Ile	Ser	Ile	Cys	Lys	Met	
		115					120					125				
Lys	Lys	Asp	Tyr	Arg	Lys	Lys	Tyr	Arg	Lys	Tyr	Val	Arg	Ser	Arg	Phe	
	130					135					140					
Gln	Cys	Ile	Glu	Asp	Arg	Asn	Ala	Arg	Leu	Gly	Glu	Ser	Val	Ser	Leu	
145					150					155					160	
Asn	Lys	Arg	Tyr	Thr	Arg	Leu	Arg	Leu	Ile	Lys	Glu	His	Arg	Ser	Gln	
				165					170					175		
Gln	Glu	Arg	Glu	Gln	Glu	Leu	Leu	Ala	Ile	Gly	Lys	Thr	Lys	Thr	Cys	
			180					185					190			
Glu	Ser	Pro	Val	Ser	Pro	Ile	Lys	Met	Glu	Leu	Leu	Phe	Asp	Pro	Asp	
		195					200					205				
Asp	Glu	His	Ser	Glu	Pro	Val	His	Thr	Val	Val	Phe	Gln	Gly	Ala	Ala	
	210					215					220					
Gly	Ile	Gly	Lys	Thr	Ile	Leu	Ala	Arg	Lys	Met	Met	Leu	Asp	Trp	Ala	
225					230					235					240	
Ser	Gly	Thr	Leu	Tyr	Gln	Asp	Arg	Phe	Asp	Tyr	Leu	Phe	Tyr	Ile	His	
				245					250					255		
Cys	Arg	Glu	Val	Ser	Leu	Val	Thr	Gln	Arg	Ser	Leu	Gly	Asp	Leu	Ile	
			260					265					270			
Met	Ser	Cys	Cys	Pro	Asp	Pro	Asn	Pro	Pro	Ile	His	Lys	Ile	Val	Arg	
		275					280					285				
Lys	Pro	Ser	Arg	Ile	Leu	Phe	Leu	Met	Asp	Gly	Phe	Asp	Glu	Leu	Gln	
	290					295					300					

Gly Ala Phe Asp Glu His Ile Gly Pro Leu Cys Thr Asp Trp Gln Lys  
 305 310 315 320

Ala Glu Arg Gly Asp Ile Leu Leu Ser Ser Leu Ile Arg Lys Lys Leu  
 325 330 335

Leu Pro Glu Ala Ser Leu Leu Ile Thr Thr Arg Pro Val Ala Leu Glu  
 340 345 350

Lys Leu Gln His Leu Leu Asp His Pro Arg His Val Glu Ile Leu Gly  
 355 360 365

Phe Ser Glu Ala Lys Arg Lys Glu Tyr Phe Phe Lys Tyr Phe Ser Asp  
 370 375 380

Glu Ala Gln Ala Arg Ala Ala Phe Ser Leu Ile Gln Glu Asn Glu Val  
 385 390 395 400

Leu Phe Thr Met Cys Phe Ile Pro Leu Val Cys Trp Ile Val Cys Thr  
 405 410 415

Gly Leu Lys Gln Gln Met Glu Ser Gly Lys Ser Leu Ala Gln Thr Ser  
 420 425 430

Lys Thr Thr Thr Ala Val Tyr Val Phe Phe Leu Ser Ser Leu Leu Gln  
 435 440 445

Pro Arg Gly Gly Ser Gln Glu His Gly Leu Cys Ala His Leu Trp Gly  
 450 455 460

Leu Cys Ser Leu Ala Ala Asp Gly Ile Trp Asn Gln Lys Ile Leu Phe  
 465 470 475 480

Glu Glu Ser Asp Leu Arg Asn His Gly Leu Gln Lys Ala Asp Val Ser  
 485 490 495

Ala Phe Leu Arg Met Asn Leu Phe Gln Lys Glu Val Asp Cys Glu Lys  
 500 505 510

Phe Tyr Ser Phe Ile His Met Thr Phe Gln Glu Phe Phe Ala Ala Met  
 515 520 525

Tyr Tyr Leu Leu Glu Glu Glu Lys Glu Gly Arg Thr Asn Val Pro Gly  
 530 535 540

Ser Arg Leu Lys Leu Pro Ser Arg Asp Val Thr Val Leu Leu Glu Asn  
 545 550 555 560

Tyr Gly Lys Phe Glu Lys Gly Tyr Leu Ile Phe Val Val Arg Phe Leu  
 565 570 575

Phe Gly Leu Val Asn Gln Glu Arg Thr Ser Tyr Leu Glu Lys Lys Leu  
 580 585 590

Ser Cys Lys Ile Ser Gln Gln Ile Arg Leu Glu Leu Leu Lys Trp Ile  
 595 600 605

Glu Val Lys Ala Lys Ala Lys Lys Leu Gln Ile Gln Pro Ser Gln Leu  
 610 615 620

Glu Leu Phe Tyr Cys Leu Tyr Glu Met Gln Glu Glu Asp Phe Val Gln  
 625 630 635 640

Arg Ala Met Asp Tyr Phe Pro Lys Ile Glu Ile Asn Leu Ser Thr Arg  
 645 650 655

Met Asp His Met Val Ser Ser Phe Cys Ile Glu Asn Cys His Arg Val  
 660 665 670

Glu Ser Leu Ser Leu Gly Phe Leu His Asn Met Pro Lys Glu Glu Glu  
 675 680 685

Glu Glu Glu Lys Glu Gly Arg His Leu Asp Met Val Gln Cys Val Leu  
 690 695 700

Pro Ser Ser Ser His Ala Ala Cys Ser His Gly Leu Val Asn Ser His  
 705 710 715 720

Leu Thr Ser Ser Phe Cys Arg Gly Leu Phe Ser Val Leu Ser Thr Ser  
 725 730 735

Gln Ser Leu Thr Glu Leu Asp Leu Ser Asp Asn Ser Leu Gly Asp Pro  
 740 745 750

Gly Met Arg Val Leu Cys Glu Thr Leu Gln His Pro Gly Cys Asn Ile

755					760					765					
Arg	Arg	Leu	Trp	Leu	Gly	Arg	Cys	Gly	Leu	Ser	His	Glu	Cys	Cys	Phe
770						775					780				
Asp	Ile	Ser	Leu	Val	Leu	Ser	Ser	Asn	Gln	Lys	Leu	Val	Glu	Leu	Asp
785					790					795					800
Leu	Ser	Asp	Asn	Ala	Leu	Gly	Asp	Phe	Gly	Ile	Arg	Leu	Leu	Cys	Val
				805					810					815	
Gly	Leu	Lys	His	Leu	Leu	Cys	Asn	Leu	Lys	Lys	Leu	Trp	Leu	Val	Ser
			820					825					830		
Cys	Cys	Leu	Thr	Ser	Ala	Cys	Cys	Gln	Asp	Leu	Ala	Ser	Val	Leu	Ser
		835					840					845			
Thr	Ser	His	Ser	Leu	Thr	Arg	Leu	Tyr	Val	Gly	Glu	Asn	Ala	Leu	Gly
	850					855					860				
Asp	Ser	Gly	Val	Ala	Ile	Leu	Cys	Glu	Lys	Ala	Lys	Asn	Pro	Gln	Cys
865					870					875					880
Asn	Leu	Gln	Lys	Leu	Gly	Leu	Val	Asn	Ser	Gly	Leu	Thr	Ser	Val	Cys
				885					890					895	
Cys	Ser	Ala	Leu	Ser	Ser	Val	Leu	Ser	Thr	Asn	Gln	Asn	Leu	Thr	His
			900					905					910		
Leu	Tyr	Leu	Arg	Gly	Asn	Thr	Leu	Gly	Asp	Lys	Gly	Ile	Lys	Leu	Leu
		915					920					925			
Cys	Glu	Gly	Leu	Leu	His	Pro	Asp	Cys	Lys	Leu	Gln	Val	Leu	Glu	Leu
	930					935					940				
Asp	Asn	Cys	Asn	Leu	Thr	Ser	His	Cys	Cys	Trp	Asp	Leu	Ser	Thr	Leu
945					950					955					960
Leu	Thr	Ser	Ser	Gln	Ser	Leu	Arg	Lys	Leu	Ser	Leu	Gly	Asn	Asn	Asp
				965					970					975	
Leu	Gly	Asp	Leu	Gly	Val	Met	Met	Phe	Cys	Glu	Val	Leu	Lys	Gln	Gln
			980					985					990		



Ser Cys Leu Leu Gln Asn Leu Gly Leu Ser Glu Met Tyr Phe Asn Tyr  
 995 1000 1005

Glu Thr Lys Ser Ala Leu Glu Thr Leu Gln Glu Glu Lys Pro Glu  
 1010 1015 1020

Leu Thr Val Val Phe Glu Pro Ser Trp  
 1025 1030

<210> 34  
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 <212> DNA  
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<220>  
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<400> 34  
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<210> 35  
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<400> 35  
 ggcctcctgc uucacacgcu cugaa 25

<210> 36  
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<220>  
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<400> 36  
 aactcctgga agcucugguc gauga 25

<210> 37  
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 <212> DNA  
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<220>  
 <223> Synthesized oligonucleotide.

<400> 37  
 gtctgcactu uggagccacg aagct 25

<210> 38  
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<220>  
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<400> 38  
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<210> 39  
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 <212> DNA  
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<400> 39  
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<210> 40  
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 <212> DNA  
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<400> 40  
 ccctttgcac tcataacgta ag 22

<210> 41  
 <211> 29  
 <212> DNA  
 <213> Homo sapiens

<400> 41  
 aaacacacag tcatcatagg gcagctcgt 29

<210> 42  
 <211> 20  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Consensus Sequence.

<220>  
 <221> MISC\_FEATURE  
 <222> (1)..(11)  
 <223> wherein "X" equals any naturally occurring amino acids

<220>  
 <221> MISC\_FEATURE  
 <222> (12)..(12)  
 <223> wherein "X" equals either "leucine" or other naturally occurring  
 aliphatic amino acid residue.

<220>  
 <221> MISC\_FEATURE  
 <222> (13)..(15)  
 <223> wherein "X" equals any naturally occurring amino acids

<220>  
 <221> MISC\_FEATURE  
 <222> (16)..(16)  
 <223> wherein "X" equals either "leucine" or other naturally occurring  
 aliphatic amino acid residue.

<220>  
 <221> MISC\_FEATURE  
 <222> (17)..(20)  
 <223> wherein "X" equals any naturally occurring amino acids

<400> 42

Xaa	Leu	Xaa	Xaa	Leu	Xaa	Leu	Xaa	Xaa	Asn	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
1				5					10					15	

Xaa	Xaa	Leu	Xaa
			20

<210> 43  
 <211> 24  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Concensus Sequence.

<220>  
 <221> MISC\_FEATURE  
 <222> (1)..(20)  
 <223> wherein "X" equals any naturally occurring amino acid.

<220>  
 <221> MISC\_FEATURE  
 <222> (21)..(21)  
 <223> wherein "X" equals any naturally occurring non-polar amino acid  
 residue.

<220>  
 <221> MISC\_FEATURE  
 <222> (22)..(24)  
 <223> wherein "X" equals any naturally occurring amino acid.

<400> 43

Leu Xaa Xaa Leu Xaa Xaa Leu Xaa Leu Xaa Xaa Asn Xaa Leu Xaa Xaa  
1 5 10 15

Leu Pro Xaa Xaa Xaa Phe Xaa Xaa  
20

<210> 44

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Concensus Sequence.

<220>

<221> MISC\_FEATURE

<222> (1)..(1)

<223> wherein "X" equals either "arginine" or "lysine".

<220>

<221> MISC\_FEATURE

<222> (2)..(3)

<223> wherein "X" equals any naturally occuring amino acid residue.

<220>

<221> MISC\_FEATURE

<222> (4)..(4)

<223> wherein "X" equals either "aspartic acid" or "glutamic acid".

<220>

<221> MISC\_FEATURE

<222> (5)..(7)

<223> wherein "X" equals any naturally occuring amino acid residue.

<220>

<221> misc\_feature

<222> (8)..(8)

<223> Xaa can be any naturally occurring amino acid

<400> 44

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1 5

<210> 45

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Consensus Sequence.

<220>

<221> MISC\_FEATURE

<222> (1)..(1)

<223> wherein "X" equals either "arginine" or "lysine".

<220>

<221> MISC\_FEATURE

<222> (2)..(4)

<223> wherein "X" equals any naturally occurring amino acid.

<220>

<221> MISC\_FEATURE

<222> (5)..(5)

<223> wherein "X" equals either "aspartic acid" or "glutamic acid".

<220>

<221> MISC\_FEATURE

<222> (6)..(7)

<223> wherein "X" equals any naturally occurring amino acid residue..

<220>

<221> misc\_feature

<222> (8)..(8)

<223> Xaa can be any naturally occurring amino acid

<400> 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

1

5